

Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

Claims 1-111 (Cancelled).

112. (Previously Presented) A method implemented in a computer for recording content distribution information in an adjunct to content, comprising: performing an exclusive-OR operation on information in an adjunct to content with copier related information each time a copy of the content is generated in a succession of copies of the content so that the information in the adjunct is modified to include the copier related information for the generation of each such copy.

113. (Cancelled).

114. (Previously Presented) The method according to claim 112, wherein the modified adjunct is provided with the copy of the content.

115. (Cancelled).

116. (Previously Presented) The method according to claim 112, wherein the adjunct is a watermark embedded in the content.

117. (Previously Presented) The method according to claim 112, wherein the adjunct is meta data associated with the content.

118. (Previously Presented) The method according to claim 112, wherein the adjunct is a signature related to the content.

119. (Previously Presented) The method according to claim 118, wherein the signature is a message digest or a hash value calculated using the content.

120. (Previously Presented) The method according to claim 112, wherein the content is copyrightable material.

121. (Previously Presented) The method according to claim 112, wherein the copier related information includes information of a user identification associated with a user of a copier used for generation of a copy of the content.

122. (Previously Presented) The method according to claim 112, wherein the copier related information includes information of an IP address associated with a copier used for generation of a copy of the content.

123. (Previously Presented) The method according to claim 112, wherein the copier related information includes information of a copy device used for generation of a copy of the content.

124. (Previously Presented) An apparatus for recording content distribution information in an adjunct to content, comprises a copier configured to: perform an exclusive-OR operation on information in an adjunct to content with copier

related information each time a copy of the content is generated in a succession of copies of the content so that the information in the adjunct is modified to include the copier related information for the generation of each such copy.

125. (Previously Presented) A method implemented in a computer for extracting content distribution information from a copy of content, comprising: performing an exclusive-OR operation a plurality of times on an adjunct to a copy of content generated from a succession of copies of the content so that copier related information for each copy of the content in the succession of copies is extracted one-at-a-time in inverse order following each performance of the exclusive-OR operation until information of an original copy of the content is detected.

126. (Previously Presented) The method according to claim 125, wherein an exclusive-OR operation was used to modify the adjunct with copier related information upon each successive generation of a copy of the content originating from the original copy of the content.

Claims 127-128 (Cancelled).

129. (Previously Presented) The method according to claim 125, wherein the adjunct is a watermark embedded in the content.

130. (Previously Presented) The method according to claim 125, wherein the adjunct is meta data associated with the content.

131. (Previously Presented) The method according to claim 125, wherein the adjunct is a signature related to the content.

132. (Previously Presented) The method according to claim 125, wherein the content is copyrightable material.

133. (Previously Presented) The method according to claim 125, wherein the copier related information includes information of a user identification associated with a user of a copier.

134. (Previously Presented) The method according to claim 125, wherein the copier related information includes information of an IP address associated a copier.

135. (Previously Presented) The method according to claim 125, wherein the copier related information includes information of a copy device used in generating a copy of the content.

136. (Previously Presented) An apparatus for extracting content distribution information from a copy of content, comprising a device configured to perform an exclusive-OR operation a plurality of times on an adjunct to a copy of content generated from a succession of copies of the content so that copier related information for each copy of the content in the succession of copies is extracted one-at-a-time in inverse order following each performance of the exclusive-OR operation until information of an original copy of the content is detected.

137. (Previously Presented) A method implemented in a computer for recording content distribution information in an adjunct to content, comprising: performing an exclusive-OR operation on information in an adjunct to content with identifying information of a network node in a packet of data when the packet of data is

relayed by the network node so that the information in the adjunct is modified to include the identifying information of the network node.

138. (Previously Presented) The method according to claim 137, wherein the adjunct is further modified to include information indicating an approximate time when the exclusive-OR operation is being performed.

139. (Previously Presented) The method according to claim 137, wherein each network node relaying the packet of data through a network to a final destination performs the exclusive-OR operation on the adjunct to content in the packet of data so that the adjunct is modified to include identifying information of all such network nodes by the time it reaches the final destination.

140. (Previously Presented) The method according to claim 137, wherein the adjunct is a watermark embedded in the content.

141. (Previously Presented) The method according to claim 137, wherein the adjunct is meta data associated with the content.

142. (Previously Presented) The method according to claim 137, wherein the adjunct is a signature related to the content.

143. (Previously Presented) A method implemented in a computer for extracting content distribution information from a packet of data, comprising: performing an exclusive-OR operation a plurality of times on an adjunct to content in the packet of data which has been received after being relayed through a plurality of network nodes so that identifying information for each of the plurality of network nodes is extracted one-at-

a-time in inverse order of such relaying following each performance of the exclusive-OR operation until information of a source of the packet of data is detected.

144. (Previously Presented) The method according to claim 143, wherein an exclusive-OR operation has been used to modify the adjunct with network node identifying information upon each relay of the packet of data from the source to a final destination.

Claims 145-146 (Cancelled).

147. (Previously Presented) The method according to claim 143, wherein the adjunct is a watermark embedded in the content.

148. (Previously Presented) The method according to claim 143, wherein the adjunct is meta data associated with the content.

149. (Previously Presented) The method according to claim 143, wherein the adjunct is a signature related to the content.

150. (Previously Presented) The method according to claim 143, wherein the content distribution information includes information of an approximate time for each relay of the packet of data from an initial time that the packet left a source node to a current time associated with the extracting of network node identifying information from the adjunct to content in the packet of data.

151. (Previously Presented) The method according to claim 150, wherein the approximate time includes information of a time zone associated with the approximate time.

152. (Cancelled).

153. (Previously Presented) The method according to claim 143, wherein identifying information for each network node includes an IP address for the network node.

154. (Previously Presented) The method according to claim 143, wherein the method is performed by a BOT received over the network by and running on the computer.

Claims 155-156 (Cancelled).

157. (Previously Presented) An apparatus for extracting content distribution information from a packet of data, comprising an extraction computer configured to perform an exclusive-OR operation a plurality of times on an adjunct to content in the packet of data which has been received after being relayed through a plurality of network nodes so that identifying information for each of the plurality of network nodes is extracted one-at-a-time in inverse order of such relaying following each performance of the exclusive-OR operation until information of a source of the packet of data is detected.

Claims 158-160 (Cancelled).

161. (Previously Presented) The apparatus according to claim 157, wherein the extraction computer is configured to determine a network topology from information provided by a BOT that has performed an exclusive-OR operation on each adjunct to content encountered by the BOT while scouring the network so that network node identifying information is extracted therefrom.